SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT *ENGINEERING AND COMPLIANCE DIVISION* APPLICATION PROCESSING AND CALCULATIONS	PAGES 22	PAGE 1
	APPL. NO. 515442	DATE 10/25/2010
	PROCESSED BY SAAndrawis	CHECKED BY

PERMIT TO CONSTRUCT/OPERATE

COMPANY NAME
TESORO REFINING AND MARKETING CO
P.O. BOX 817, WILMINGTON, CA 90748-0817

EQUIPMENT LOCATION
2101 E. PACIFIC COAST HIGHWAY
WILMINGTON, CA 90744
Facility ID#: 800436 Facility Type: NOx & SOx RECLAIM (Cycle 1), Title V

EQUIPMENT DESCRIPTION
Additions are shown as underlined and deletions are shown as ~~strikeouts.~~
Section D: Permit to Construct/ Permit to Operate
The following device will be moved from process 15 System 1 to System 7 in Section D of the following permit:

Equipment	ID No.	Connected To	RECLAIM Source Type / Monitoring Unit	Emissions and Requirements	Conditions
PROCESS 15: STORAGE TANKS					P13.1
SYSTEM ~~1~~ 7 : INTERNAL FLOATING ROOF TANKS					S13.7
STORAGE TANK, ~~FIXED ROOF~~ INTERNAL FLOATING ROOF, NO. 80072, WITH INTERNAL HEATING COILS AND A MIXER, 79965 BBL; DIAMETER: 117 FT ; HEIGHT:41 FT 10 IN FLOATING ROOF, PONTOON, WELDED SHELL PRIMARY SEAL, CATEGORY A, METALLIC SHOE SECONDARY SEAL, RIM MOUNTED, MULTIPE WIPERS TYPE GUIDEPOLE, SLOTTED, WITH GASKETED SLIDING COVER WITH FLOAT POLE WIPER A/N: ~~470117~~ 515442	D614			**HAP: (10) [40CFR 63 Subpart CC, #2, 6-23-2003]** BENZENE: (10) [40CFR 61 Subpart FF_01, 12-4-2003]; VOC: 500 PPMV (8) [40CFR 61 Subpart FF, 12-4-2003] [40CFR 60 Subpart Kb, 10-15-2003]	B59.8, C1.54, C6.4, H23.1, K67.15, K171.3, ~~K67.2, E336.2,~~

* (1) Denotes RECLAIM emission factor (2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements
** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FEE ANALYSIS

All fees shown in Table 1 have been paid by the applicant.

Table 1 – Summary of Fee Analysis

A/N	Equipment Description	BCAT/ CCAT	Fee Schedule	Fee Type	Fee	XPP Fee	Total Fee
515442	Storage tank	251902	C	Modification	$3,313.05	$1,656.53	$4,969.58
515441	Permit Amendment	555009 (BCAT)		FP RECLAIM/ Title V Significant Amendment	$1,723.07		$1,723.07
				Total	$4,932.54	$1,622.46	$6,692.65

BACKGROUND AND PROCESS DESCRIPTION

This application was received by the AQMD on October 12, 2010 from Tesoro Refining and Marketing Co for the modification of storage tank 80072 (D614). The tank will be modified from fixed roof tank to internal floating roof tank. The internal floating roof will be full contact, pontoon type roof (see attachment 2 for the manufacturer design and description). The new roof would be equipped with a shoe-type primary seal and a rim mounted secondary seal, both Category "A" seals.

This modification is to retrofit the tank from fixed roof to internal floater. Recent inspections of this tank indicate that the roof is very thin and has experienced significant corrosion. This roof replacement will eliminate the potential that a hole will form on the roof of the tank.
Permitting history for this tank:

- This subject tank is currently covered by permit no. G2094 (A/N 470112).
- This tank was constructed in 1964 storing crude oil under A/N A-23709 (P04632) and vented to vapor recovery system.
- In 1985, there was a change of ownership from Texaco Inc to Texaco Refining & Marketing Inc under A/N 136875 (M46924).
- In 1998, there was a change of ownership from Texaco Refining & Marketing Inc to Equilon Enter LLC, Shell Oil Products US under A/N 346338 (F17929).
- In 2007, there was a change of ownership from Equilon Enter LLC, Shell Oil Pro US to Tesoro Refining & Marketing Company under A/N 470112 (G2094)

Table 2 lists the application submitted along with the equipment description and the proposed modification. See Attachment 3 for previous permits, and Attachment 4 for MSDS sheet.

Table 2

A/N	*Device ID No.*	*Current A/N*	*Current Equipment Description*	*Current Permit limit*	*Proposed Change*
525442	*D614*	*470117*	*Storage tank, No. 80072, Fixed Roof, vented to vapor recovery system, Crude Oil*	*None*	*Convert from Fixed roof to Internal Roof with primary and secondary seals category "A" and remove from vapor recovery system*

COMPLIANCE RECORD REVIEW

The facility's compliance history for the past 2 years indicates one NC (D11548) is still pending (see Attachment 1). D11548 was issued to Tesoro on 09/09/2010 to provide BSV and non-BSV info on HTU-4's RSG for permitting info. The detail of this NC provided in Attachment 1.

EMISSIONS CALCULATIONS

The emissions from tank 80072 were calculated using EPA tanks 4.09 program (Attachment 5) Since the subject storage tank was installed in 1964 and no modification was done, the tank was not subject to New Source Review Regulation (REG XIII) and has no throughput or commodity limit.

Calculations procedures for the District's New Source Review (NSR) Regulation with regards to determining Offset and BACT requirements are contained in Rule 1306 (b) & (d).

For determining BACT and offset requirements, the net increase is based on the post-modification potential to emit minus the actual emissions calculated pursuant to Rule 1306(c) (1) if the source was never subject to Rule 213 or Regulation XIII.

In accordance to Rule 1306(c) (1), the emissions amount shall be calculated from the average of actual emissions, as determined from company records, annual emissions declarations pursuant to Rule 301, or other data approved by the Executive Officer or designee, whichever is less, which have occurred each year during the two-year period immediately preceding the date of permit application. Since the tank is a pre-NSR tank, the pre-modification emissions were calculated using two years average (see Attachment 6)

As shown in Attachment 5, the post –modification maximum potential to emit (PTE) for ROG is calculated with EPA Tanks 4.09d.

The Maximum potential VOC emissions calculations are done in 2-step process:
1. Using same throughput which is 2-yr average as baseline for fixed roof versus Internal Floater
2. Using increase throughput using Internal Floater.

There is a reduction in VOC emissions after the modification of installing IFR vs. FR, therefore no BACT applied. Using the increase of throughput resulted in increase of VOC emissions, BACT applies which is internal floater and offset required.

See Table 3 for Maximum Potential change for VOC emissions

Table 3: Max. Potential change in VOC emissions

Tank No.	***Product***	***Throughput (barrels/ month)***	***Pre-Modification (Fixed Roof) Emissions previous 2-year lbs/yr (lbs/day)***	***Post-Modification Emissions with internal floating roof &previous 2-year average throughput***	***Post-Modification Emissions with internal floating roof & new throughput***	***Change***
80072 D614	*TSO Light Crude Oil TVP=2.1 psia*	*500,000 barrels/ month*	*1,960.15 +1358.04 =3318.19/2 =1659.095lbs/year (4.54 lbs/day)*	*867.85lbs/year =2.4 lbs/day*	*2,594.91 lbs/yr 7.1 lbs/day*	*+935.8 lbs/yr* ***+2.56 lbs/day***

*AER emissions for year 2008= 1,960.15-Annual throughput =70,490,290 gals/yr
*AER emissions for year 2009= 1,358.19- Annual throughput =44,593,140 gals/yr

RULES EVALUATION

Regulation II- PERMITS

Rule 212: Standards for approving and Issuing Public Notice (Amended Nov. 14, 1997)

212 (a) The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code of these rules. The operation of the storage tank is expected to comply with this requirement.

212(c)(1) Public notification is required if any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX may emit air contaminants located within 1000 feet from the outer boundary of a school. The source is not within 1000 feet of a school, public notification is therefore not required.

212(c)(2) Public notification is required if any new or modified facility has on-site increases exceeding any of the daily maximums specified in subdivision (g) of this rule. The increase in emissions with the operation of the storage tank does not exceed any of the daily maximum specified; public notification is therefore not required.

212(c)(3) Public notification is required if the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one in a million (1×10^{-6}), due to a project's new construction or proposed modification.

This proposed modification does not result in MICR exceeding one in a million, public notification is therefore not required. (See Attachment 7 for health risk assessment results)

212(g) This subdivision sets forth the process for federal public notification and distribution and specifies the daily maximum emissions increase as follows:

Air Contaminant	**Daily Maximum in lbs/day**
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

Since the increase in emissions does not exceed the daily maximum specified, federal public notification is not required.

Regulation IV PROHIBITIONS

Rule 401 Visible Emissions (Amended November 9, 2001)

Operation of the storage tank is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

Rule 402 Nuisance (Adopted May 7, 1976)

Operation of the storage tank is not expected to result in a public nuisance. Therefore, compliance with this rule is expected.

Rule 463 Organic Liquid Storage (Amended May 6, 2005)

This rule applies to any above-ground tank with a capacity of 19,815 gallons or greater for storing organic liquids. The internal floating roof tanks are subject to the requirements of Rule 463 (c)(2)(B).

463(c)(2)(B) A fixed roof tank which has an internal floating-type cover installed, modified, or replaced after June 1, 1984, shall have a closure device which consists of either a single liquid mounted primary seal or a primary and a secondary seal. All openings and fittings shall be fully gasketed or controlled in a

manner specified by the Executive Officer. The closure device shall control vapor loss with an effectiveness equivalent to a closure device which meets the requirements of subparagraph (c) (1) (A). Seal designs not identified on the current list of seals approved by the Executive Officer shall not be installed or used.

The proposed internal floating roof is equipped with category A primary and secondary seals that meet the requirement of this rule (See attachment 2 for AQMD approval letter and the seals drawings).
All openings and fittings are gasketed and controlled in a manner that meets Rule 1178 requirements, which are more specific than the requirements of this rule. Additional specification of the seal and opening fittings/controls is contained in the Rule 1178 evaluation.
Compliance with Rule 463 is expected with proper recordkeeping and inspections

Regulation XI - SOURCE SPECIFIC STANDARDS

Rule 1149: Storage Tank Cleaning and Degassing (Amended May 2, 2008)

This Rule has requirements for tank cleaning and degassing operations. Emissions from above ground tanks are required to be controlled by one of the following methods: liquid balance, negative pressure displacement and subsequent incinerations, vapor condensation with a refrigeration system, or any other method which controls VOC by at least 90%. A permit condition requires continued compliance with this rule.

Rule 1173: Fugitive Emissions of volatile Organic Compounds (Amended February 6, 2009)

This rule specifies leak control, identification, operator inspection, maintenance, and recordkeeping requirements for valves pumps, compressors, pressure relief valves, and other components from which fugitive VOC emissions may emanate. Since this modification does not involve a change to any component outside of the storage tank, no change in fugitive VOC emissions is expected.

Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Refineries (Amended April 7, 2006)

This Rule applies to facilities which VOC emissions exceeding 20 tons in their Annual emissions Report (AER) for any year staring

with 2000. Tesoro/Shell AER for the year 2000 exceeded 20 tons VOC. Therefore, this rule applies to the subject tank. The rule requires that the Internal Floating Roof Tank shall be equipped as follows:

(a) Equip each fixed roof support column and well with a sliding cover that is gasketed or with flexible fabric sleeves;

(b) Equip each ladder well with a gasketed cover. The cover shall be closed at all times, with no visible gaps, except when the well must be opened for access;

(c) Equip and maintain other roof openings according to the specifications listed in subparagraph (d)(1)(A) or (d)(1)(C);

(d)Equip the tank with a rim seal system consisting of either a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B); and

(e) Ensure that the concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 50 percent of its lower explosive limit (LEL) for those installed prior to June 1, 1984 and 30 percent of its LEL for those installed after June 1, 984. A permit condition C6.4 with this requirement will be imposed.

As shown in the table below, the proposed fittings and seals for the proposed pontoon type internal roof meet the requirements of this rule

Summary of Roof Opening /Fitting Controls and seals

Roof opening/ Fitting or seal type	**Roof Seal and Opening /Fitting configuration**		**Applicable Rule 1178**
	No	**Type**	
Support Column and well	8	Sliding Cover gasketed	1178(d)(3)(A)
Ladder Well	1	Cover,gasketed	1178(d)(3)(B)
Access Hatch	1	Cover, bolted & gasketed	1178(d)(1)(A)(i)
Automatic Gauge Float Well	0	Cover ,bolted & gasketed	1178(d)(1)(A)(i)
Guage Hatch/sample well	1	Weighted mechanical actuation, cover,gasketed	1178(d)(1)(A)(ii)
Roof legs	36	Adjustable, sock cover	1178(d)(1)(A)(iii)
Rim Vent	0	Gasketed	1178(d)(1)(A)(iv)
Vacuum Breaker	1	Weighted mechanical actuation, gasketed	1178(d)(1)(A)(v)
Roof Drain	0	Slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	1178(d)(1)(A)(vi)
Slotted Guidepole	1	Gasketed sliding cover with float pole wiper	1178(d)(1)(A)(vii)

Primary seal	1	Mechanical shoe	1178(d)(1)(B)(i)
Secondary Seal	1	Rim mounted and shall not be attached to the primary seal	1178(d)(1)(A)(ii)

This tank, with the proposed internal floating roof, is expected to comply with the requirements of this rule.

Regulation XIII: ***NEW SOURCE REVIEW***

RULE1303: REQUIREMENTS (Amended Dec. 6, 2002)

Rule 1303(a):-Best Available Control Technology

Any new or modified source which results in an emission increase of any nonattainment contaminants must employ BACT for the new or relocated source or for the actual modification to an existing source. BACT is required for any increase of emissions that exceed 1 lb/day on a maximum daily basis. As shown in Emissions Calculations section, there was no emission increase for internal floating roof (IFR) vs fixed roof (FR) when using the same throughput (i.e. 2-yr average). Therefore, BACT for FR does not apply. However, due to an increase in throughput requested by Tesoro, there is an emission increase greater than 1 lb/day, therefore, BACT applies for the IFR tank. The BACT for internal floating roof tank is District Category "A" –approved seals and fittings that comply with Rule 1178. Compliance is expected.

Rule 1303(b)(1):-Modeling

The applicant must substantiate with modeling that the new facility or modification will not cause a violation, or make significantly worse any existing violation of any state or national ambient air quality standards at any receptor location in the District. According to 1306(b), the new total emissions for modified sources shall be calculated on a pound per day basis for determination of BACT and modeling applicability. The modeling procedures are discussed in Appendix A to the rule. It is specified in Appendix A that modeling is not required for VOC or SOx, therefore, modeling is not required under this application for the subject tank.

Rule 1303(b)(2):-Emissions Offsets

This modification will result in increase of VOC emissions of 2.56 lbs/day. Since the refinery is located in the South Coast Air Basin(SOCAB), an offset ratio of 1.2-to-1 is required. The resulting estimated offset of 3.07 (2.56 x1.2) lbs/day is rounded off to 3

lbs/day. Tesoro has an ERC Certificate AQ007213 of 37 lbs/day of ROG, which will be utilized to offset the 3 lbs of ROG increase. See attachment 8 for a copy of ERC certificate.

Rule 1303(b)(3) Sensitive Zone Requirements:

Unless credits are obtained from the Priority Reserve, facilities located in the South Coast Air Basin are subject to the Sensitive Zone requirements specified in Health and Safety Code Section 40410.5. A facility in zone 1 may obtain Emission Reduction Credits originated in zone 1 only, and a facility in zone 2A may obtain Emission Reduction Credits from either zone 1 or zone 2A, or both, or demonstrate to the Executive Officer or designee a net air quality benefit in the area impacted by the emissions from the subject facility. Tesoro is in Zone 1 and the ERCs that will be utilized were originated in Zone 1. See attachment 8 for a copy of ERC certificate. Compliance is expected.

Rule 1303(b)(4) Facility Compliance

Tesoro must comply with all applicable Rules and Regulations of the AQMD. According to the enforcement records, Tesoro is currently in compliance with all applicable rules and regulations of the District, except for an NC D11548, as described in the Compliance Record Review section above.

Rule 1303(b)(5) Major Polluting Facilities

In addition to the above requirements, any new major polluting facility or major modification at an existing major polluting facility shall comply with the following requirements (Since the increase in estimated maximum VOC emissions under this application is 2.56 lbs/day, the requirements of this section are applicable):

(A) Alternative Analysis

The applicant must conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with that project. Since this project is exempt from CEQA analysis, it will be exempt from this requirement per (b)(5)(D)(i)

(B) Statewide Compliance

The applicant must demonstrate prior to the issuance of a Permit to Construct, that all major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in the State of California are subject to emission limitations and are in compliance or on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act.

A letter from Mr. David Reed, the Tesoro Los Angeles Refinery Manager, indicating that all major sources owned or operated by Tesoro Refining and Marketing Company in California are in compliance or are on a schedule for compliance with all applicable standards emission limitations and standards under the clean Air Act. The certification letter dated July 22, 2010, is provided in Attachment 9.

(C) Protection of Visibility

The applicant must conduct a modeling analysis for plume visibility in accordance with the procedures specified in Appendix B if the net emission increase from the new or modified source exceeds 15 tons/year of PM_{10} or 40 tons/year of NO_X;. There will not be any PM10 or NOx emissions from this source, therefore, requirements of this subsection do not apply.

(D) California Environmental Quality Act (CEQA)

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) indicates that the project does not have any impacts which trigger the preparation of a CEQA document. The expected impacts of the project on the environment are not significant since the net emission ROG increase does not trigger the thresholds ROG: 55 LBS/DAY of The District's CEQA Guidelines. Therefore a CEQA analysis is not required.

Regulation XIV - TOXICS AND OTHER NON-CRITERIA POLLUTANTS

Rule 1401: New Source Review of Toxic Air Contaminants (Amended March 4, 2005)

This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) from new permit units, relocations or modifications to existing permit units which emit toxic air contaminants listed in Table 1 of this rule.

Rule 1401 Tier 1 & 2 Risk Assessment was performed using the following information:

1. Toxic chemical weight fractions are obtained from the speciations of the product that will be stored in tank 80072.
2. MICR Factors, Chronic Factors, Acute Factors, MET, X/Q for Chronic, X/Q for Acute & LEA are obtained from Attachment L of AQMD Risk Assessment Procedures for Rules 1401 and 212.

Based on the calculations, the cumulative increase in maximum individual cancer risk (MICR) does not exceed one in a million. For target organ systems, neither the cumulative increase in total chronic hazard index (HIC) nor the total acute hazard index (HIA) exceeds 1.0 for any target organ system. Table 4 tabulates the results of Harp Risk Assessment for MICR. Attachment 7 includes the detailed Risk Calculations submitted by the facility and verified by the District.

Table 4 Summary of Risk Assessment Analysis

	Receptor Risk (Offsite Worker)	***Receptor Risk (Residential)***
MEI*	4.14E-07	5.15E-08

***Maximum Exposed Individual is equivalent to MCIR**

1401(d)(1)MICR and Cancer Burden

The cumulative increase in MICR shall not result in an increased MICR greater than one in one million, if the permit is constructed without T-BACT and greater than ten in one million if the permit unit is constructed with T-BACT. The calculated MICR is less than one in a million, therefore the facility complies with this requirement.

1401(d)(2)Chronic Hazard Index

The cumulative increase in total chronic HI for any target organ system shall not exceed 1.0 at any receptor location. Since the calculated chronic hazard index is less than 1.0, the facility complies with this requirement.

1401(d)(3)Acute Hazard Index

The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location. Since the calculated chronic hazard index is less than 1.0, the facility complies with this requirement.

1401(d)(4)Risk Per Year

The risk per year shall be less 1/70 of 1 in a million . Since the tank emissions are consistent from year to year, the facility complies with this requirement.

1401(d)(5)Operating conditions imposed pursuant to Rule 1401, which prohibit or limit the use or emission of toxic air contaminants, shall apply only to those toxic air contaminants listed in the version of Rule 1401 applicable at the time the permit conditions were imposed. There is no permit conditions prohibiting or limiting the use of toxic air contaminants for this facility.

1401(d)(6)Federal New Source Review for Toxics

This section requires construction with Best Available Control Technology for Toxics (T-BACT) and compliance with 40 CFR 63.40 through 63.44. The requirements do not need to be met if the source is subject to an existing National Emission Standard for Hazardous Air Pollutants (NESHAP). Since the modification is subject to 40CFR63 Subpart CC, this section does not apply.

Reg XX Regional Clean Air Incentives Market (RECLAIM)

Rule 2005: ***New Source Review for RECLAIM***

Tesoro is a NOx and SOx RECLAIM facility. It is therefore subject to Reg XX.

2005(c) Requirements for Existing RECLAIM facilities

This subdivision requires BACT, modeling and proof of sufficient RECLAIM Trading Credits (RTC) for an application for a Facility Permit amendment that results in any increase in NOx and SOx emissions. These applications will not increase NOx or SOx emissions, therefore this subdivision does not apply.

2005(g) Additional Federal Requirements for Major Stationary Sources

This subdivision lists additional requirements for application for a Facility Permit or an Amendment to a Facility Permit for a new, relocated or modified major stationary source, as defined in the Clean Air Act, 42, U.S.C. Section 7511a(e). Section 7511a(e)(2) defines modification as any change at a major stationary source which results in any increase in emissions. This application will not increase NOx or SOx emissions, therefore this subdivision does not apply.

PART 2: STATE REGULATIONS

CEQA ***California Environmental Quality Act***

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) submitted by Tesoro indicates The expected impacts of the project on the environment are not significant since the net emission ROG increase does not trigger the thresholds ROG: 55 LBS/DAY of The District's CEQA Guidelines. Therefore a CEQA analysis is not required.

PART 3: FEDERAL REGULATIONS
Standards of Performance for New Stationary Sources (NSPS)

40 CFR 60, **Subpart K**: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after June 11, 1973 and Prior to May 19, 1978.

This standard does not apply. Tank 80072 was not constructed or modified between June 11, 1973 and May 19, 1978.

40 CFR 60, **Subpart Ka**: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after May 18, 1978 and Prior to July 23, 1984.

This standard does not apply. Tank 80072 had no modification between May 18, 1978 and July 23, 1984.

40 CFR 60, **Subpart Kb**: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after July 23, 1984

The subject application is the modification of tank 80072 by changing from fixed roof to an internal roof tank.

Modification is defined in 60.14 as any physical change or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies. The modification to this tank results in an emissions increase.

Reconstruction is defined in 60.15 as the replacement of components of an existing facility to such an extent that:
(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

The installation of the new roof and reconstruction of the tank qualify as a "reconstruction" since the fixed capital cost of new components exceeds 50 % of the fixed capital cost for construction a new tank (based on the e-mails by Mike Kulakowski dated on July14, 2010) and the increase of emissions qualify as a modification. Therefore, this tank is subject to the requirements of this rule.

According to 60.112b(a)(1), any internal floating roof tank with a capacity greater than 40,0000 gallons that stores a petroleum liquid with a vapor pressure greater than 0.5 psia must be equipped with following :

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in contact with it). The proposed pontoon type IFR will comply with this requirement.
(ii) The IFR shall be equipped with one of the following: (A) a liquid mounted foam or liquid filled seal, (B) Two seals mounted one above the other so that each forms a continuous closure(bottom one may be vapor mounted), or (C) a mechanical shoe seal. The proposed roof complies with (B) since it has continuous primary and secondary seals.
(iii) Each opening in a non –contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. The proposed roof will comply with this requirement.
(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents , vents rim space vents, column wells , ladder wells, sample wells and stub drains is to be equipped with a cover or lid which is to maintained in a closed position at all times (i.E. no visible gap) except when the device is in actual use. The cover or lid shall be bolted except when they are in use. The proposed roof complies with these requirement. The slotted guidepole is equipped with a pole float that will comply with the requirement to be equipped with a cover or lid.

The proposed roof also complies with the following Subpart Kb requirements:
(i) Automatic bleeder vents shall be equipped with a gasket.
(ii) Rim space vents shall be equipped with a gasket.
(iii) The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
(iv) Each penetration of the internal roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
(v) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

Condition H 23.40 ensures continued compliance with all applicable requirements of this rule.

Subpart CC:National Emissions Standards for Hazardous air Pollutants for Petroleum Refineries

63.640 Applicability and designation of affected source (Amended October 28, 2009)

The refining process units and equipment located at the Tesoro are subject to the requirements of this subpart addressing

- Miscellaneous process vents
- Storage vessels
- Waste water streams, and
- Equipment leaks
- The modified storage tank as proposed in this application is subject to storage vessels standards.

63.646 Storage vessel provisions (Amended October 28, 2009)

Group 1 storage vessels are subject to the requirements of these provisions. Group 1 storage vessel is defined as a storage vessel at an existing or new source that has all the following:

	Existing source	New source
Design capacity	≥177 m3(46,764gal)	≥151 m3(39,894gal)
Vapor Pressure	≥8.3 kPa(1.2 psia)	≥3.4 kPa(0.49 psia)
HAPs	>4% wt	>2%wt

According to Tesoro, the subject tank does not contain greater than 4% HAPs, therefore, the subject tank is not considered a Group 1 storage vessel and the requirements of these provisions do not apply. It is noted that storage tank 80072 is classified as a Group 2 storage vessel which is defined as a storage vessel that does not meet the definition of a Group 1 storage vessel. The only requirement for operators of Group 2 storage tanks is to report these tanks in the Notification of Compliance Status Report as discussed below.

63.655 Reporting and Recordkeeping Requirements(Amended October 28,2009)

63.655 (f)The operator of a source subject to this subpart shall submit a Notification of Compliance Status Report which includes identification of each storage vessel subject to this subpart. The subject storage tank should be included and identified in the Compliance Status Report as a Group 2 storage vessel (defined in 63.641 as a storage vessel that does not meet the definition of a Group 1 storage vessel). Under this regulation, any storage vessel with a capacity greater than 40 m^3 (10,566 gallons) that stores an organic liquid that does not exceed the vapor pressure and HAP-

content thresholds outlined above are Group 2 storage vessels, which are subject to some recordkeeping requirements. Group 2 storage vessels are identified in the permit by the following notation in the "Emissions and Requirements" column: HAP: (10) [40CFR 63 Subpart CC, #2, 6-23-2003]. The facility is expected to comply with the requirement by including this subject tank as a Group 2 vessel in this report after its modification.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR 61 Subpart FF: National Emission Standard for Benzene Waste Operations

The Tesoro Los Angeles Refinery is subject to Benzene Waste NESHAP. By existing permit condition P13.1, the facility is expected to continue to comply.

Reg XXX-----Title V Permits

Rule 3001(a): Applicability (Amended November 14, 1997)

The Tesoro Los Angeles Refinery has been designated as a Title V facility. The initial Title V permit was issued on November 23, 2009. Tesoro Refinery is currently subject to Title V. The permit issued for this tank will be issued as a revision of the Title V permit. Permit revisions are categorized into the following four types: administrative, minor, de minimus significant and significant.

As defined in Rule 3000, a significant permit revision means any facility permit revision that is not eligible for administrative permit revision, minor permit revision, or de minimis significant permit revision procedures. Such revisions include any of the following:

1. relaxation of any monitoring, recordkeeping, or reporting requirement, term, or condition in the Title V permit;
2. the addition of equipment or modification to existing equipment or processes that result in an emission increase of non-RECLAIM pollutants or hazardous air pollutants (HAP) in excess of any of the emission threshold levels ;
3. any modification at a RECLAIM facility that results in an emission increase of RECLAIM pollutants over the facility's starting Allocation plus the nontradeable Allocations;
4. requests for a permit shield when such requests are made outside applications for initial permit or permit renewal issuance;
5. any revision that requires or changes a case-by-case evaluation of: reasonably available control technology (RACT) pursuant to Title I of

the federal Clean Air Act; or maximum achievable control technology (MACT) pursuant to 40 CFR Part 63, Subpart B;
6. any revision that results in a violation of regulatory requirements;
7. any revision that establishes or changes a permit condition that the facility assumes to avoid an applicable requirement;
8. installation of new equipment subject to a New Source Performance Standard (NSPS) pursuant to 40 CFR Part 60, or a National Emission Standard for Hazardous Air Pollutants (NESHAP) pursuant to 40 CFR Part 61 or 40 CFR Part 63; or,
9. modification or reconstruction of existing equipment, resulting in an emission increase subject to new or additional NSPS requirements pursuant to 40 CFR Part 60, or to new or additional NESHAP requirements pursuant to 40 CFR Part 61 or 40 CFR Part 63.

Since the proposed changes for tank 80072 is subject to new NSPS requirements pursuant to 40 CFR Part 60, and new NESHAP requirements pursuant to 40 CFR Part 61 or 40 CFR Part 63, this revision will be considered a ***significant revision*** to the existing Title V permit. For Significant revisions, AQMD needs to notify the public and the EPA prior to permit issuance. Therefore, the permit is subject to a 30 day public Notice and a 45 day EPA review and comment period.

RECOMMENDATIONS

The District considers this facility to be in compliance with all the permit requirements, and recommends the issuance of the subject permit to construct/operate subject to the following conditions:

PROCESS CONDITIONS

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61, SUBPART	FF

[40CFR 61 Subpart FF, 11-12-2002]

[Processes subject to this condition : 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15]

SYSTEM CONDITIONS

S13.7 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	463
VOC	District Rule	1178
VOC	District Rule	1149

[RULE 1149, 7-14-1995; RULE 1178, 12-21-2001; RULE 463, 3-11-1994; RULE 463, 5-6-2005]

[Systems subject to this condition : Process 15, System 1 , 2]

DEVICE CONDITIONS

B. Material/Fuel Type Limits

B59.8 The operator shall only use the following material(s) in this device :

Heavy Crude Oil

[RULE 1303, 5-10-1996]

[Devices subject to this condition : **D614**]

C. Throughput or Operating Parameter Limits

C1.54 The operator shall limit the throughput to no more than 500,000 barrel(s) in any one calendar month.

The operator shall measure and record the liquid volume of the tank using an automatic tank level gauging system(ATLGS). The ATLGS shall measure the tank liquid level and calculate the liquid volume using the tank strapping tables. The volume measurements shall be recorded electronically once every 15 minutes.

The operator shall calculate the throughput in barrels using the total one-way (increasing) volume movement on a monthly basis. The calculation will be based on the sum of the increasing volume readings.

The ATLGS installed shall be verified once per quarter by comparing against a manual tank level measurement. If the ATLGS differs from the manual tank level measurement by more than 1.0 inch or 0.8%, whichever is greater, the ATLGS shall be repaired and back to service within 10 days.

In the event of a failure or routine maintenance of the ATLGS, the ATLGS shall be repaired and put back into service within 10 days of the time that the ATLGS failed or was removed from service for maintenance.

While the ATLGS is being repaired or maintained, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to time that the ATLGS went out of service.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D617, D614]

C6.4 The operator shall use this equipment in such a manner that the _hydrocarbon concentration_ being monitored, as indicated below, does not exceed 30 percent of the lower explosive limit.

The operator shall use an explosimeter or equivalent device to monitor the hydrocarbon concentration in the vapor space above the floating roof device on a semi-annual basis.

[RULE 1178, 12-21-2006; RULE 463, 5-6-2005]

[Devices subject to this condition: D610, D617, **D614,** D618, D621, D630]

H. Applicable Rules

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations

Contaminant	Rule	Rule/Subpart
VOC	40CFR60,	SUBPART Kb

[**40CFR 60 Subpart Kb, 10-15-2003**]

[Devices subject to this condition : D469, D524, D598, D610,D613, D617, **D614,** D630, D648, D659, D982, D1001, D1002, D1078]

E. Equipment Operation/Construction Requirements

E 336.2 The operator shall vent the vent gases from this equipment as follows:

All vent gases under normal operating shall be directed to a vapor recovery system consisting of compressors D641, D642, D643 AND OR D644, which can be operated independently to maintain a system vacuum that efficiency collects all vented gases.

This equipment shall not operated unless the vapor recovery system is in full use and has a valid permit to receive vent gases from this equipment.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D458, D459, D460, D461, D462, D466, D467, D520, D521, D526, D531, D533, D534, D544, D546, D547, D548, D550, D551, D552, D553, D554, D555, D556, D557, D558, D559, D560, D561, D562, D563, D564, D565, D566, D567, D569, D571, D572, D573, D574, D575, D576, D577, D578, D579, D589, D584, D592, D593, D594, D595, D596, D597, D598, D599, D600, D602, D603, D604, D606, D607,D608, D611, D613, ~~***D614***~~,, D615, D616, D617~~,~~ D619, D620, D622, D623, D624, D625, D626, D627, D628, D631, D633, D634, D636, D637, D639, D640, D807, D808, D809,D982, D998, D1001, D1002, D1500]

K. Record Keeping/Reporting

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Throughput and vapor pressure of stored liquid.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997, RULE 463, 5-6-2005**]

[Devices subject to this condition : D520, D521, D531, D533, D534, D543, D544, D546, D548, D549, D554,D555, D556, D558, D559, D560, D562, D563, D565, D566, D567, D568, D569, D571, D572, D573, D575, D576, D577, D578, D579, D581, D582, D583, D584, D585, D586, D587, D588, D591, D592, D593, D594,D596, D597, D598, D599, D603, D604, D605, D609, D611, D612, D613, ~~***D614***~~,, D615, D616, D617, D618, D619, D620, D621, D622, D623, D625, D626, D627, D628, D629, D631, D632, D633, D634, D635, D636,D637, D640, D647, D648, D649, D650, D651, D652, D653, D654, D655, D656, D658, D660, D1001, D1002,D1095, D1500, D1555]

K67.15 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

- Throughput and vapor pressure of stored liquid.
- Hydrocarbon concentration measurements done in the vapor space above the floating roof of the tank.
- Other records that may be required to comply with the applicable requirements of District Rules 463, 1149 and 1178.

[RULE 1178, 4-7-2006; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 463, 5-6-2005]

[Devices subject to this condition : D613, D617, **D614,** D618, D621]

K171.3 The operator shall provide to the District the following items:
Final drawings and/or specifications of the internal floating roof to be installed/constructed shall be submitted to the District within 30 days after its construction

[RULE 1178, 4-7-2006]

[Devices subject to this condition: D610, D613, D617, **D614,** D618, D621, D630]

Attachments

1.	NOV's and NC's Issued
2.	Manufacturer Design and SCAQMD Approval letter of the seals
3.	Previous Permits
4.	MSDS Sheets
5	Emissions Calculations
6	AER (previous emissions)
7	Toxic Analysis
8	ERC Certificate
9	Certification of Statewide Compliance